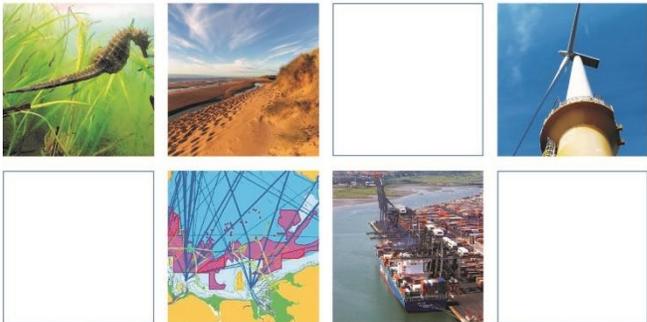


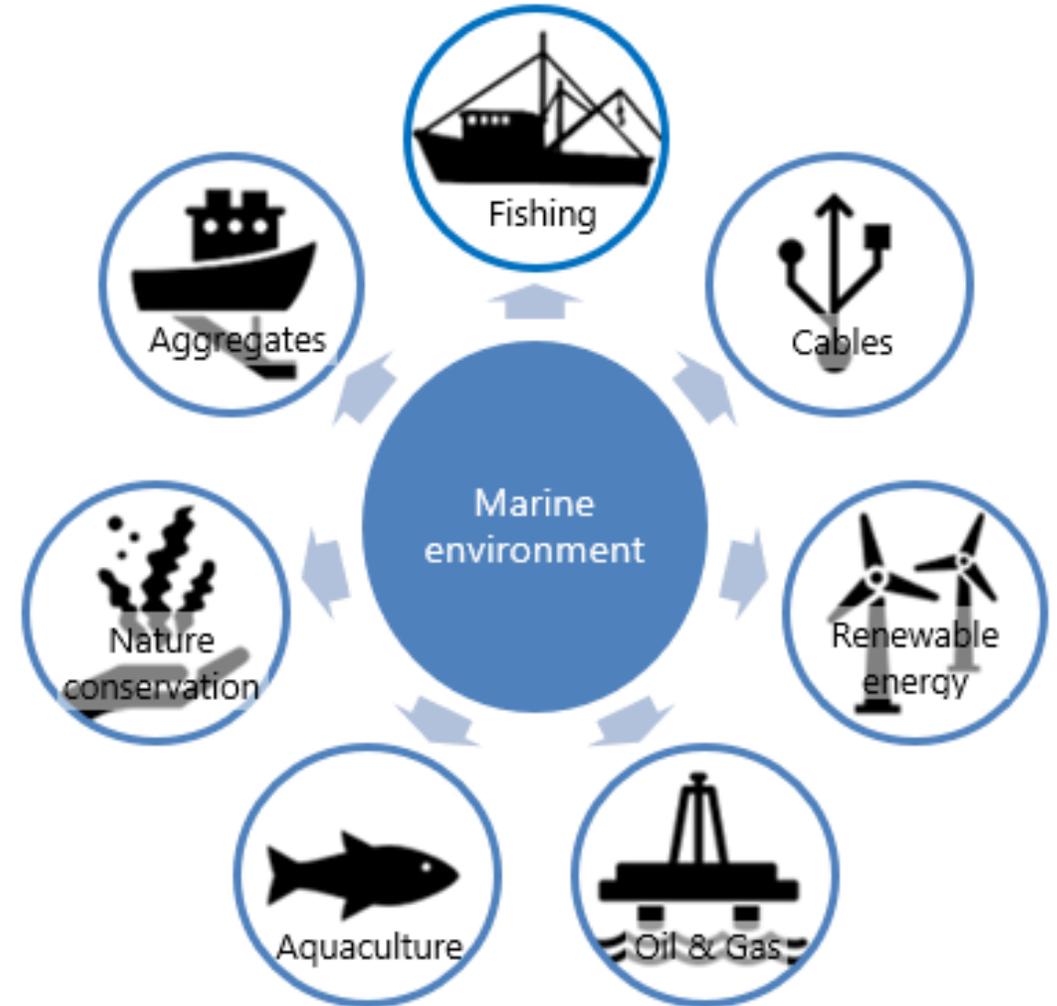
Spatial Squeeze in Fisheries

Suzannah Walmsley



Introduction

- Growing spatial demands in the marine environment from a range of sectors
 - Target to achieve Net Zero
 - Increased offshore wind, as well as wave and tidal energy
 - Target to protect 30% of the marine environment by 2030
 - Increasing nature conservation designations and management
 - Aquaculture
 - Aggregate extraction
 - Oil and Gas
 - Cables



Aims and Approach

- Explore scenarios to quantify and visualise the spatial demands of existing and forthcoming projects, plans and policies, and their potential implications for the area available to commercial fishing

Explore spatial scenarios

- 5 scenarios
- Assumptions for each sector

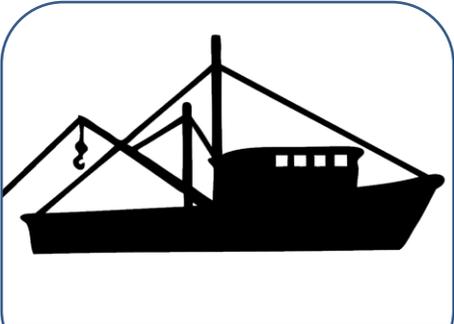
Quantify and visualise the implications for fisheries

- Mapping of scenarios using spatial data for each sector

Caveats

- Focus on restrictions for trawling
- Local, national and international considerations

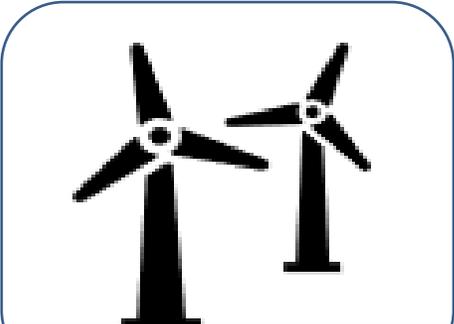
Sectors



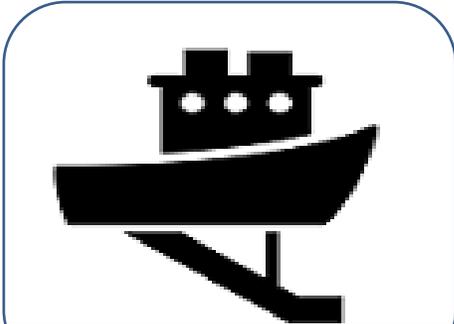
Fisheries
management
restrictions



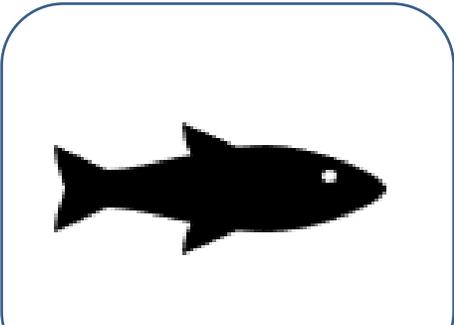
Nature conservation



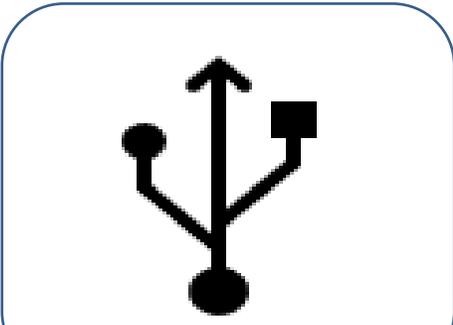
Offshore renewable
energy
(wind, wave, tidal)



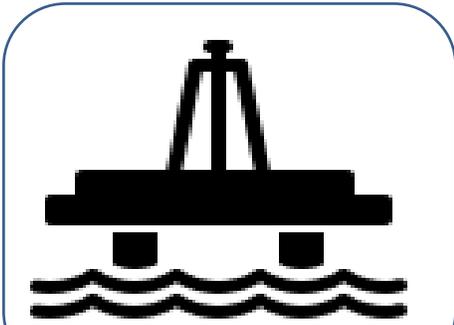
Aggregate extraction



Aquaculture



Cables



Oil and Gas

Past (2000)

SACs and NMRs designated, but MCZs, NCMPAs and most offshore SACs not yet designated, nor management measures implemented. Offshore renewable energy is small-scale, experimental sites. Fishing could not take place in deep water (>800 m depth) due to technical constraints, nor over rocky seabed, or in uneconomical areas. Aquaculture, aggregates, cables and oil and gas installations as they were in 2000.

Present

MCZs and NCMPAs designated, as well as current SACs, some with management measures to protect the most sensitive features from trawling and dredging. 10.4 GW offshore wind installed and commissioned across 40 wind farms. Tide and wave energy only small projects. Trawling banned from waters >800 m depth, and on vulnerable marine ecosystems >400 m, and technical constraints to trawling over rocky seabed. Aquaculture, aggregates, cables and oil and gas installations as they were in 2020/21.

Scenarios

Future 1 (2030)

Trawling banned across 80% of offshore SACs (for benthic features), MCZs and NCMPAs, and across whole sites for HPMAs. 40 GW offshore wind deployed in UK waters, based on existing areas and Round 3 OWF areas. Wave and tidal energy develops in line with sector plans and trends. Aquaculture, aggregates, cables and oil and gas development in line with sector growth aspirations. Oil and gas platforms not yet decommissioned.

Future 2 (2050)

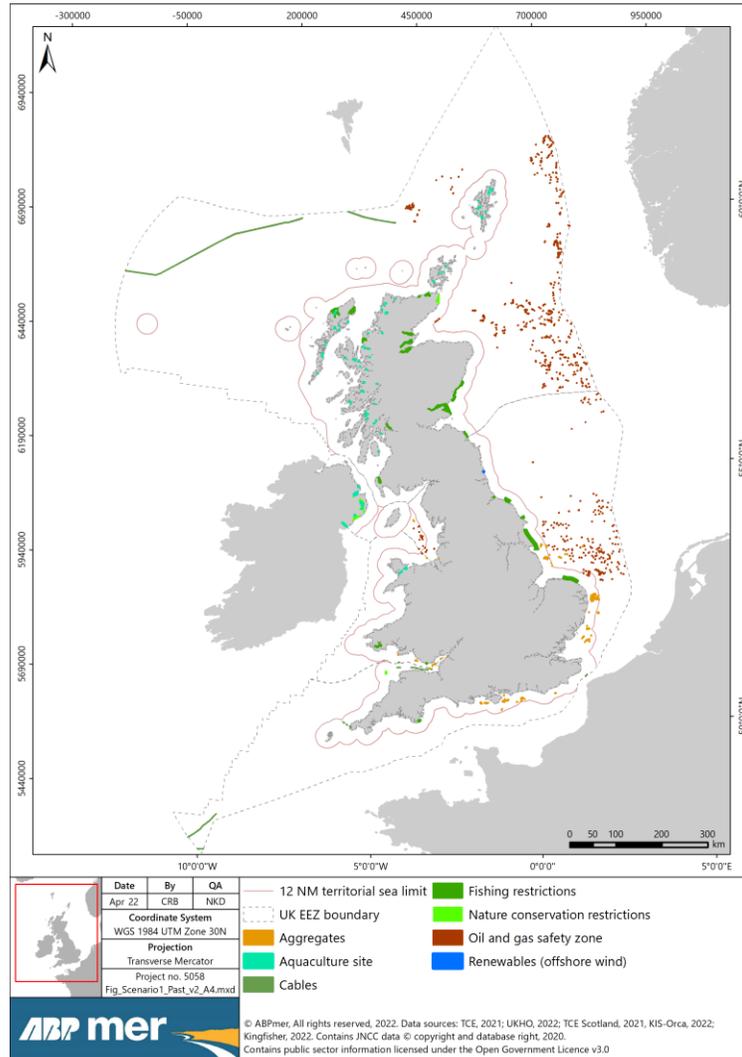
Trawling banned across 80% of offshore SACs (for benthic features), MCZs and NCMPAs, and across whole sites for HPMAs. 115 GW offshore wind deployed in UK waters, based on existing areas, Rounds 3 and 4, ScotWind areas and Celtic Sea zones. Wave and tidal energy develops in line with sector plans and trends. Aquaculture, aggregates, cables and oil and gas development in line with sector growth aspirations. Some oil and gas platforms decommissioned but others remain.

Future 3 (Worst Case)

As for Future 2, but assuming trawling is banned across all SACs (for benthic features), MCZs, NCMPAs and HPMAs. No trawling within offshore wind farms. No trawling or dredging over cables including a 0.25 nautical mile buffer either side. All oil and gas platforms remain.

Scenarios

Past Scenario (2000)



- Fishing relatively unconstrained
- Oil and Gas and aquaculture sectors well established
- Some areas with trawling restrictions
- Offshore wind in its infancy

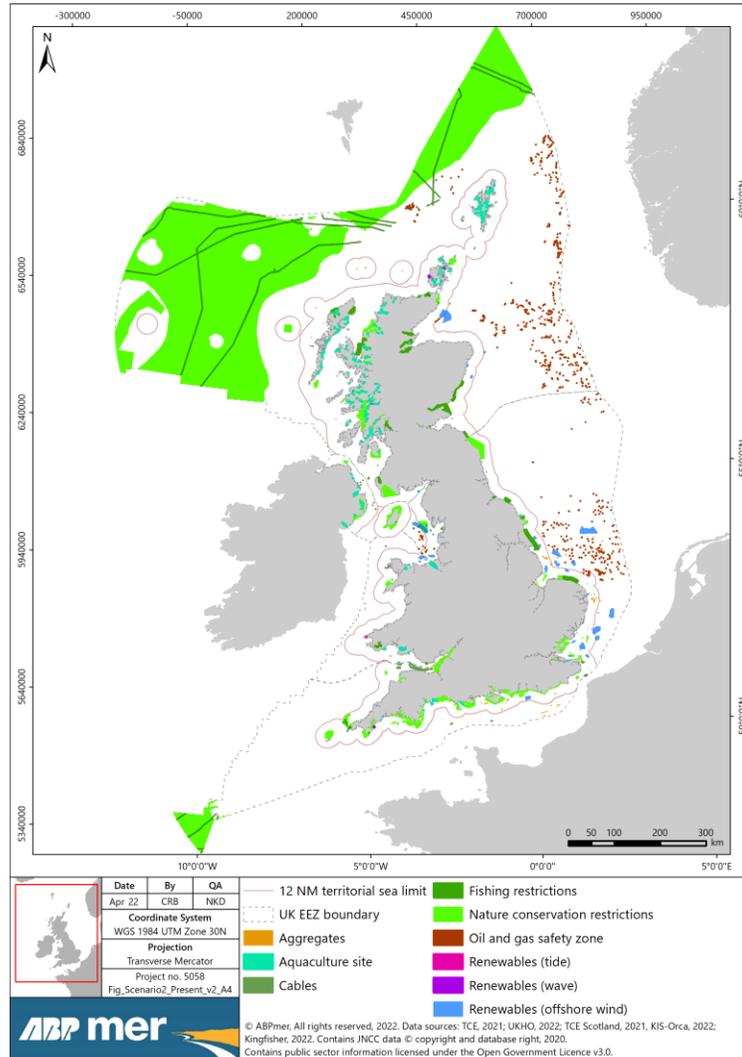
Area restricted

Percentage of EEZ

2,712 km²

0.37 %

Present Scenario



- Nature conservation restrictions in inshore waters increasing
- Roll-out of offshore wind farms
- Oil and Gas well established
- Many aquaculture sites, seaweed aquaculture beginning
- Aggregate dredging in English and Welsh waters
- Tide and wave energy still small-scale

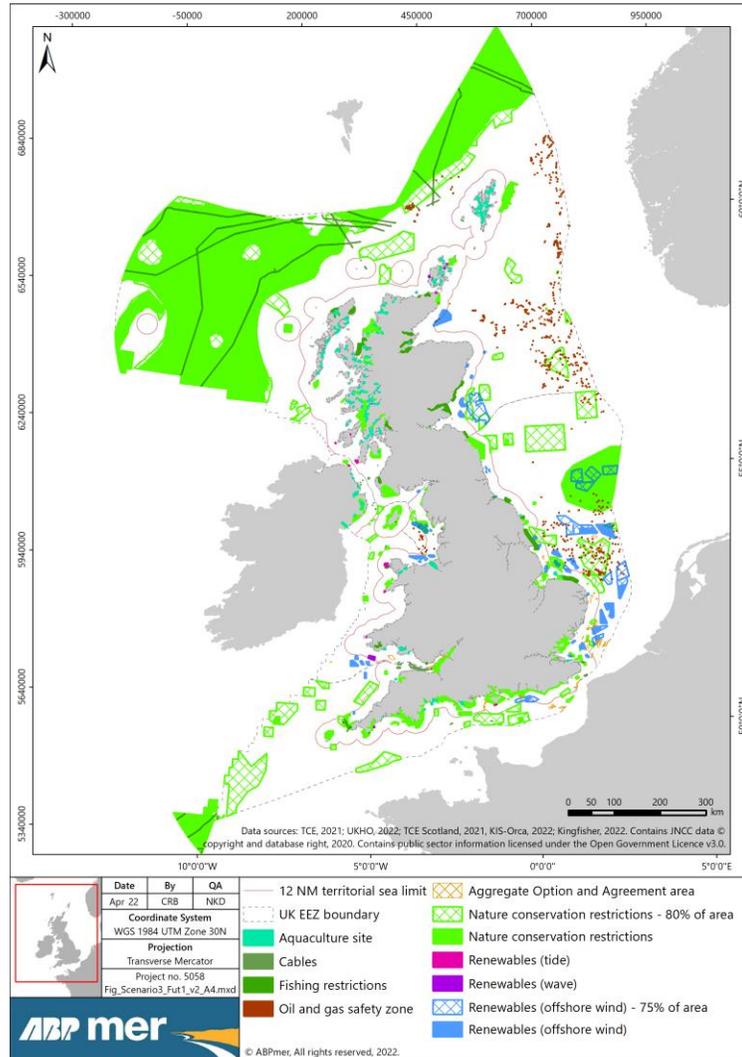
Area restricted

Percentage of EEZ

169,994 km²

23.13 %

Future 1 Scenario (2030)



- Increasing offshore wind farms (42GW)
- Restrictions in MPAs increasing in offshore sites
- HPMAs not mapped but will increase areas restricted
- Oil and Gas maintains present footprint
- Aquaculture expanding, especially seaweed

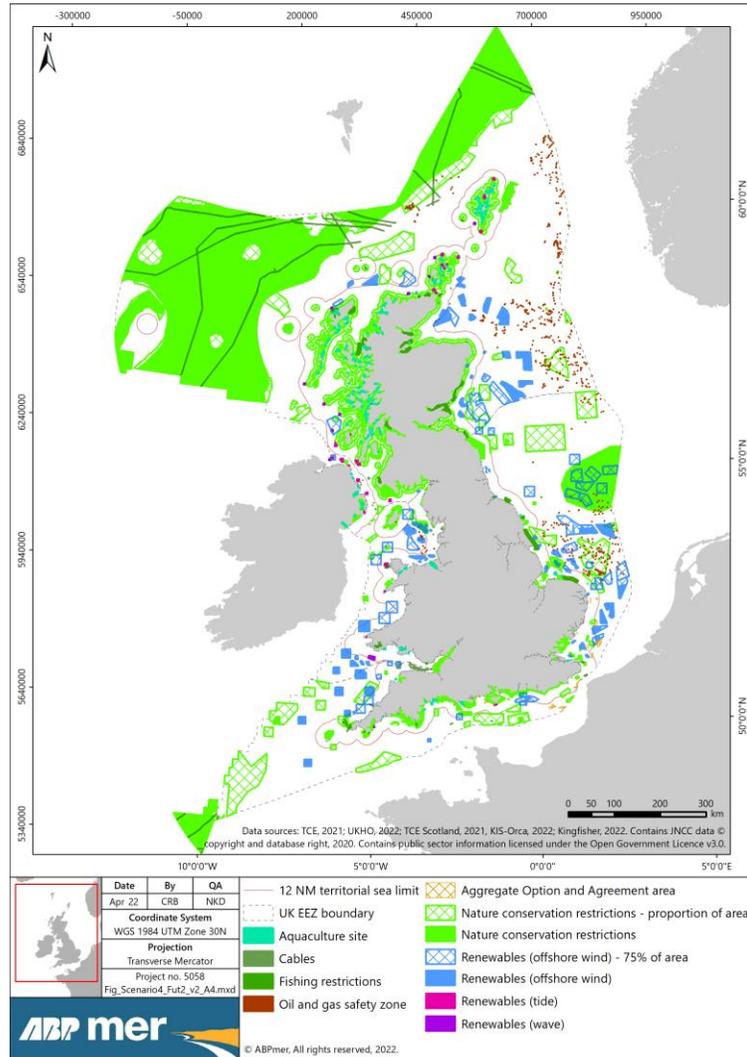
Area restricted

Percentage of EEZ

266,457 km²

36.26 %

Future 2 Scenario (2050)



- Offshore wind reaches 115 GW – spatial footprint ten times present
- Wave and tidal energy increasing
- Oil and Gas some decommissioning
- Aquaculture continues expansion, seaweed has largest footprint

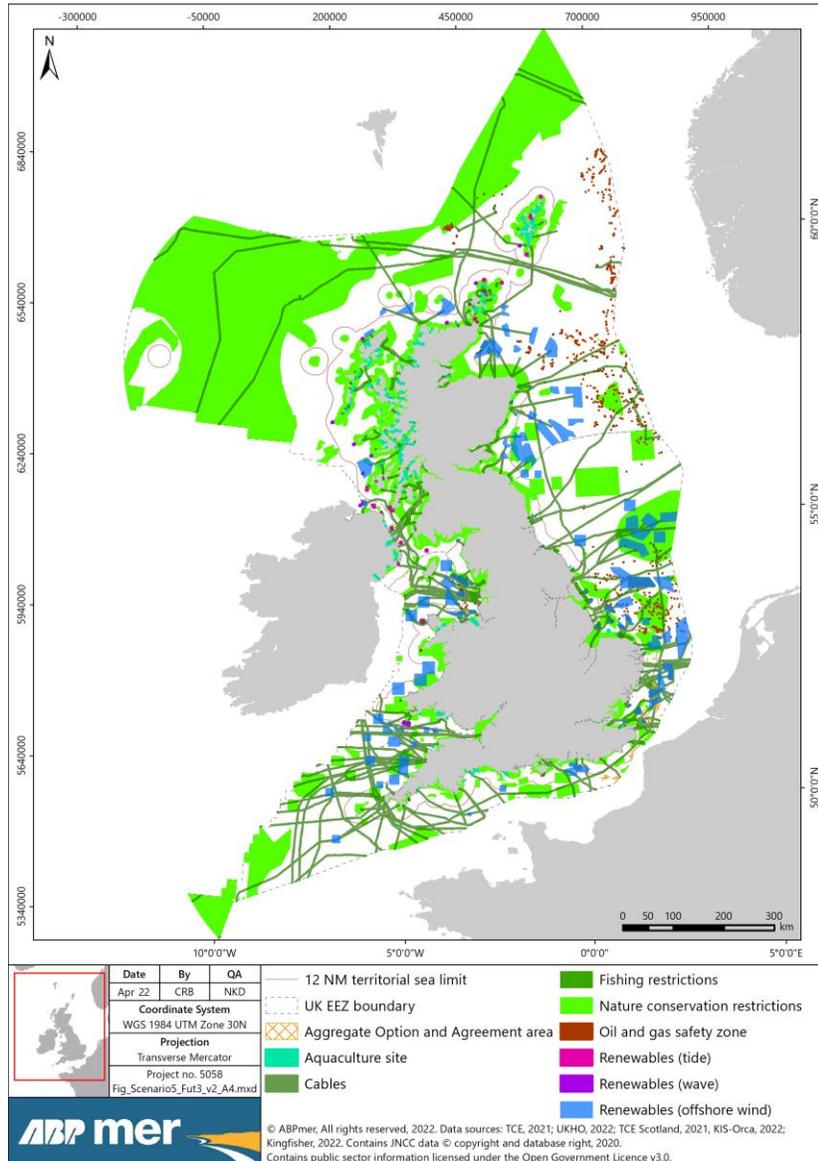
Area restricted

Percentage of EEZ

276,713 km²

37.66 %

Future 3 Scenario (2050)



- Spatial restrictions are intense
- Map similar to Future 2, but fishing excluded from offshore wind arrays, full extent of MPAs and 0.25 NM either side of cables
- Offshore wind farms occupy 31,500km²
- HPMA's not mapped but further increase restrictions

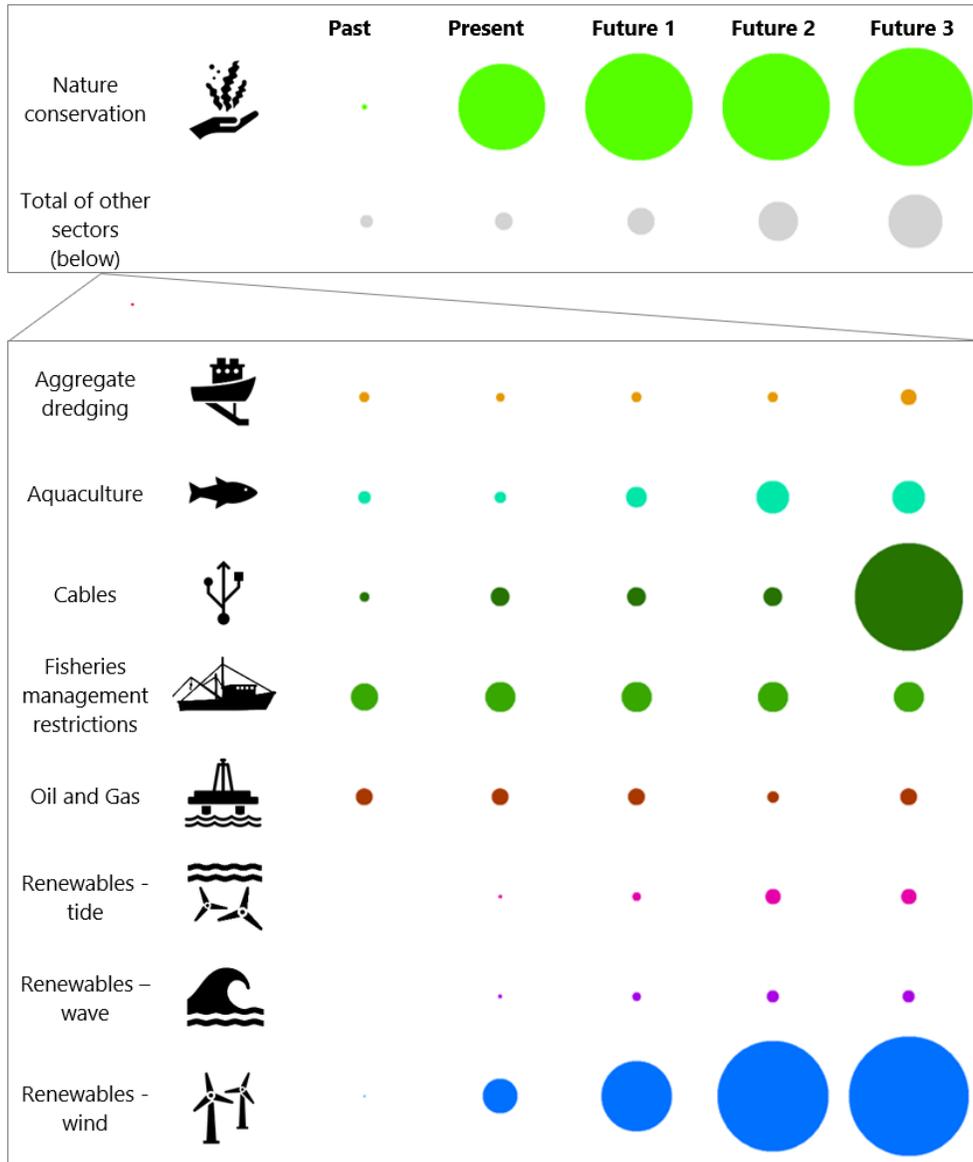
Area restricted

Percentage of EEZ

356,834 km²

48.56 %

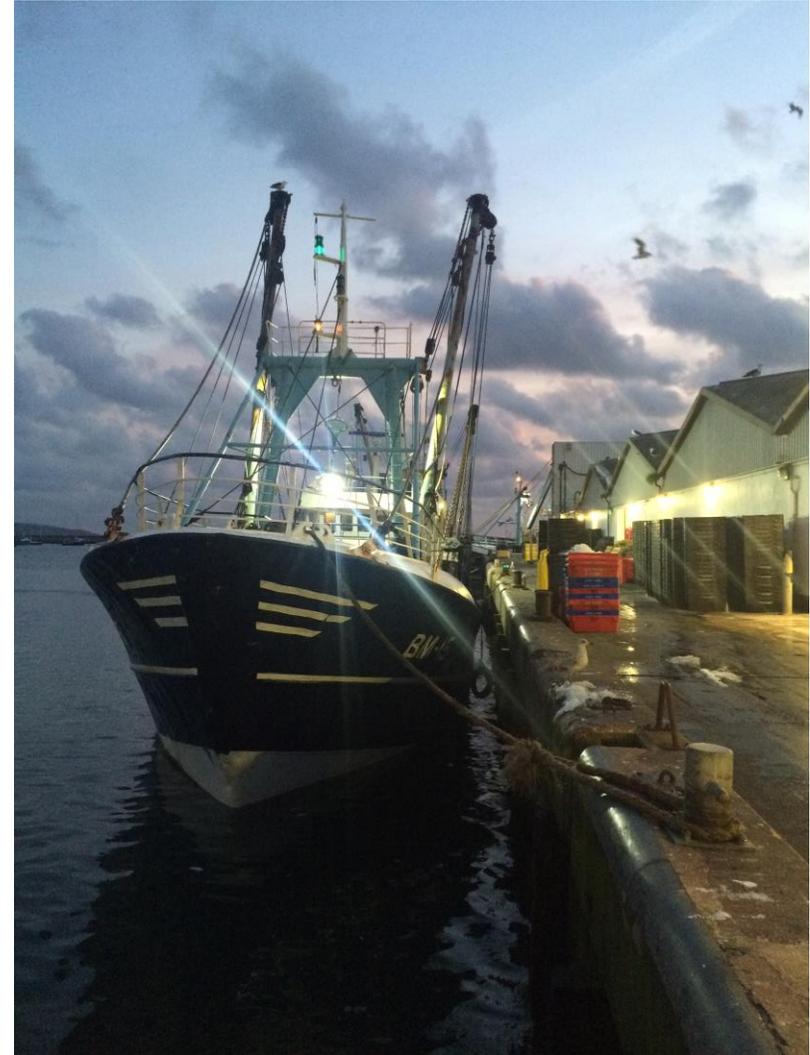
Relative footprint of each sector



- Nature conservation restrictions have the largest spatial footprint
- Offshore wind's footprint predicted to increase substantially
- Sectors with a small footprint could have a significant impact on fisheries locally, depending on siting
- Difference between Future 2 and Future 3 highlights the scope for policy and implementation to mediate the worst of the impacts

Conclusions

- Demand for marine space will increase significantly over the next 10-30 years – up to 49% of the EEZ
- Nature conservation and offshore wind have the greatest future spatial footprints
- Displacement under future scenarios could be significant
- Local and regional impacts can be particularly severe on some fleet segments
- Importance of co-existence and co-location
- Potential impacts on other gears should also be considered



Recommendations

- Recognition of the importance of fishing for food security and coastal communities
- Accountability in decision making
- Improved evidence base for marine spatial planning
- Stronger and more effective voice for fishing industry in the planning process
- Partnership working and strategic approach to nature conservation measures
- Support to fishing industry to enable adjustment where impacts cannot be avoided

Thank you for your attention

Suzannah Walmsley
swalmsley@abpmer.co.uk

